

## RAW SEQUENCE LISTING ERROR REPORT

BIOTECHNOLOGY  
SYSTEMS  
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 10/672,764  
Source: OIP/  
Date Processed by STIC: 10/8/2003

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY

FOR CRF SUBMISSION AND PATENTIN SOFTWARE QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 4.1 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW FOR ADDRESS:

<http://www.uspto.gov/web/offices/pac/checker/chkr41note.htm>

Applicants submitting genetic sequence information electronically on diskette or CD-Rom should be aware that there is a possibility that the disk/CD-Rom may have been affected by treatment given to all incoming mail.

Please consider using alternate methods of submission for the disk/CD-Rom or replacement disk/CD-Rom.

Any reply including a sequence listing in electronic form should NOT be sent to the 20231 zip code address for the United States Patent and Trademark Office, and instead should be sent via the following to the indicated addresses:

1. EFS-Bio (<<http://www.uspto.gov/efc/efs/downloads/documents.htm>> , EFS Submission User Manual - ePAVE)
2. U.S. Postal Service: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450
3. Hand Carry directly to (EFFECTIVE 12/01/2003):  
U.S. Patent and Trademark Office, Box Sequence, Customer Window, Lobby, Room 1B03, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202
4. Federal Express, United Parcel Service, or other delivery service to: U.S. Patent and Trademark Office, Box Sequence, Room 1B03-Mailroom, Crystal Plaza Two, 2011 South Clark Place, Arlington, VA 22202

Revised 10/08/2003



II

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:17

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.in.txt

Output Set: N:\CRF4\10082003\J672764.raw

4 <110> APPLICANT: Jolly, Chris  
 6 <120> TITLE OF INVENTION: Immunoglobulin Compositions and Methods  
 8 <130> FILE REFERENCE: 13311.1001U  
 10 <140> CURRENT APPLICATION NUMBER: US/10/672,764  
 10 <141> CURRENT FILING DATE: 2003-09-26  
 10 <160> NUMBER OF SEQ ID NOS: 68  
 12 <170> SOFTWARE: FastSEQ for Windows Version 4.0

Does Not Comply  
 Corrected Diskette Needed

## ORDERED SEQUENCES

750 <210> SEQ ID NO: 28  
 751 <211> LENGTH: 152  
 > 752 <212> TYPE: Protein *invalid - use PRT*  
 753 <213> ORGANISM: Escherichia coli  
 755 <400> SEQUENCE: 28  
 757 Met Ser Glu Lys Tyr Ile Val Thr Trp Asp Met Leu Gln Ile His Ala  
 758 1 5 10 15  
 759 Arg Lys Leu Ala Ser Arg Leu Met Pro Ser Glu Gln Trp Lys Gly Ile  
 760 20 25 30  
 761 Ile Ala Val Ser Arg Gly Gly Leu Val Pro Gly Ala Leu Leu Ala Arg  
 762 35 40 45  
 763 Glu Leu Gly Ile Arg His Val Asp Thr Val Cys Ile Ser Ser Tyr Asp  
 764 50 55 60  
 765 His Asp Asn Gln Arg Glu Leu Lys Val Leu Lys Arg Ala Glu Gly Asp  
 766 65 70 75 80  
 767 Gly Glu Gly Phe Ile Val Ile Asp Asp Leu Val Asp Thr Gly Gly Thr  
 768 85 90 95  
 769 Ala Val Ala Ile Arg Glu Met Tyr Pro Lys Ala His Phe Val Thr Ile  
 770 100 105 110  
 771 Phe Ala Lys Pro Ala Gly Arg Pro Leu Val Asp Asp Tyr Val Val Asp  
 772 115 120 125  
 773 Ile Pro Gln Asp Thr Trp Ile Glu Gln Pro Trp Asp Met Gly Val Val  
 774 130 135 140  
 775 Phe Val Pro Pro Ile Ser Gly Arg  
 776 145 150  
 19871 <210> SEQ ID NO: 62  
 19872 <211> LENGTH: (27) *26 shown (p.2)*  
 19873 <212> TYPE: DNA  
 19874 <213> ORGANISM: Artificial Sequence  
 19876 <220> FEATURE:  
 19877 <223> OTHER INFORMATION: Made in a laboratory from synthetic material  
 > 19879 <221> NAME/KEY: misc\_feature

Does Not Comply  
 Corrected Diskette Needed

pp 1-2,6

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:19

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.in.txt

Output Set : N:\CRF4\10082003\J672764.raw

```

19880 <222> LOCATION: (1)...(27)
19881 <223> OTHER INFORMATION: n = A,T,C or G
> 19883 <400> 62
> 19884 cgggatacga ggcctctatac group of 6 (27) 26
20281 <210> SEQ ID NO: 68
20282 <211> LENGTH: 13886
20283 <212> TYPE: DNA
20284 <213> ORGANISM: Artificial Sequence p.6
20286 <220> FEATURE:
20287 <223> OTHER INFORMATION: Made in a lab from synthetic material
20289 <400> SEQUENCE: 68
20290 ggtacactgca cttcccaagt gtccacttgt attctgttcc tttactcttg ttacagaaaa 60
20291 gtagacacat attcagttct agtaccagtg tagggagcgc tttccatgag attggtatcca 120
20292 gaaaaaaatg gcaaacatcg gatccgttaa tataaaaaat agccacagatg tatatatata 180
20293 tatgtgtgtg tgtgtgtgtg tgtgtgtgta cacacgcgcg gcgatgtgtg agttgataag 240
20294 cacagttgga gtgggtttct atccacatgt acctgcacct gcagggtattc tcagggtgcc 300
20295 taatcaactg taggacccta aaggaaataa gagtctcccc tcaacccttg aagagtgttt 360
20296 ggggtcacccg tgtgtccaat ctcttgagct ccaggaagg ggtccctggg 420
20297 gatgcataag atctttttct ggagttcttc tgcagagttc actgggtttc ctaaaaggcaa 480
20298 ttccattttt caaaagatgg tgtgaggagc atgtggtgtc cctaaaggag aattctgagc 540
20299 cagggcacaa ccaactttata ctgagctgga tacactggta ggaataact ctgtcagctc 600
20300 agatagaaac ctccctgcat ggttggggct gggctgcagg ggccgctccg gatcacacca 660
20301 gcacaggctc ccgcccacga gcagggtcac agggaggtcg ggagaggttc ctcccagggc 720
20302 ctgggacttc ctttaaaaaa atctaaaata agtatttcac aaagactgct gaagtgttga 780
20303 taaatatcta ttcaattgtg agcatttacc aaactggatg ttgtaatgag aaccattttt 840
20304 acaattggga ttccaactc tgctggaggt cagggaagaga tctttgttta taaataaatt 900
20305 caatttttgg ataaacacag tcattcccta aataacgcac tcacatatta tggctagaaa 960
20306 atgatgcaag ttgacctgga gacagtcaaa tgtggtttca aagtggagtg ctgtccttga 1020
20307 ggagcttgtt ttccagtggt ggaagctctg tcaacacaga gtccaggat gtgtgaggga 1080
20308 cacatggcct ctcaacagatg tacggcttga accctcagct tctacagttg tgtcacccat 1140
20309 gtgtctgttt ctactactgg gtcaggaaatt gggctattaa atagacctct tcatgaatat 1200
20310 gcaatttaact gagggtgacta tagtatctcc gttccctgag agcctcaccc aacaaccaca 1260
20311 cccctctctc ggagaagccc ctgatgcaca gctcctcacc actgaagcat cctgaaggtt 1320
20312 cctctctctg atggcagcag caacaggtaa ggggctcccc agtctcaggg ctgaggaaga 1380
20313 aaccagccca ctctatgtgag acttcaacca ctctgtgtgc cactccacag gtgcccactc 1440
20314 cctgcagctg tgcagctgtg ggcctgaggt gaagaagcct ggggcctcag tgaagggttc 1500
20315 ctctaagctt tctggttaac ccttcaacct ctatggtatg aattgggtat gatagacccc 1560
20316 tggacagggc tttgagtgga tgtgatggat catcacctac actgggaacc caactgtata 1620
20317 ccacggcttc acaggatggt ttgtctcttc catggacacg tctgtcagca cggcgtgtct 1680
20318 tcagatcagc agcctaaagg ctgaggacac ggcgcagtat tctgtgga agtacacagt 1740
20319 gtggaaaacc acatcccag agtttcagaa agcctgagga aggaggcagc ttgtctgagc 1800
20320 tggagcagtg tccacagcgt ttctggaact tccatagtat cctattgttc attgagtttc 1860
20321 gctttaatat tagccaagaa tatgggatag acgggtgtct ctaagagatc cttaacttgc 1920
20322 ccattttgat ggggtttccc aaagaactga gaagccaact ttttcgcaaa aagaccocaa 1980
20323 gccatgcctc gctccagaaa cactgttata catttctggt tctttgatta actgacaaa 2040
20324 tctcatcagc gcacctgggc taatttcaca tcaggtagaaa atatgtgctt taaagcaagg 2100
20325 ctacagttgt aatagcaatt cctgcttaatt aaccttcagc attgtgtgtg tgtgctccat 2160
20326 caactaatta gcttagttta aggtttccaa tgggagtttc taataaatat aaggagtgta 2220
20327 tagaagttcc cetaattaaa acaattgtga gaacaacctc agtgttcaac catatttcaa 2280

```

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:19

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.ln.txt

Output Set : N:\CRF4\10082003\J672764.raw

|       |             |             |             |             |             |             |      |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|------|
| 20328 | cccttcacca  | caaaggaact  | ttcatctctc  | ctggaagtgt  | gggttcatttt | caaattagtt  | 2340 |
| 20329 | tttttatttt  | aatatctcca  | gattattgta  | tgtgactatt  | ttagcagaaa  | gtgaattatg  | 2400 |
| 20330 | ggaactttgaa | ctaacccaact | gaaaatacat  | tcagaactaa  | ttaaaacaga  | tgccagaatg  | 2460 |
| 20331 | tgattggctc  | caggcattttt | aaattcaaca  | ggttatgtaa  | ccaggctttta | aattttgcaca | 2520 |
| 20332 | tctctgtggt  | accttcatag  | cacagtcaac  | tcccattatg  | taagaaatgg  | tgagtgcatt  | 2580 |
| 20333 | cccaagggtc  | ttgcacagtt  | ataaaaaatg  | acttgatgag  | gtgaggagtt  | gtttaaattc  | 2640 |
| 20334 | ccctctgaag  | aagcagcatc  | aacccaacaa  | accactctct  | tcctctgtgt  | actagagctc  | 2700 |
| 20335 | tgtcacaggc  | cacatggacc  | taaactcctt  | atggagatta  | caggagctacg | taaatgggac  | 2760 |
| 20336 | tgatcggttt  | tatgctgtta  | aattaatagg  | tgagtctgca  | ctccagcctg  | ggcaacagaa  | 2820 |
| 20337 | taactctgtt  | tgtaaaaata  | aaaagaaaga  | taaattaata  | catctgact   | ttgacatttc  | 2880 |
| 20338 | ggataataat  | attttcataa  | accgaattta  | attataccca  | gattgttacc  | tcacacttca  | 2940 |
| 20339 | ctgaaaagt   | ctagtttatg  | ttgagttcca  | tcaacactcc  | acatgttcaa  | atctggacat  | 3000 |
| 20340 | ccaagagagt  | ctagagaata  | aaacgcgaat  | agggcagtga  | aacttgcgtg  | tattcagcac  | 3060 |
| 20341 | ctcttaacct  | aggaaggactc | aatcacacct  | ggaacactct  | gcttttctga  | atggctcaca  | 3120 |
| 20342 | atgactccag  | ctcactctcc  | aacctctcca  | aacatctggc  | ctctgtttgc  | ctcgaagtca  | 3180 |
| 20343 | cgctctgtc   | ttagtctatg  | ttctgaagtc  | tttgtagagg  | tgaaaatgag  | ctgtcagatg  | 3240 |
| 20344 | gatcttctct  | ctcactgcac  | catggaattt  | gctatttcaac | ttaatgacca  | ctctttccac  | 3300 |
| 20345 | aalgtgttgt  | tctctttggc  | ctgttcaata  | ctggtgattt  | tcaagggaat  | ctcagttgaa  | 3360 |
| 20346 | ctcttactgt  | tttgcatttt  | gtctccatga  | caatgtttgg  | aagtttttct  | tctagcagca  | 3420 |
| 20347 | taacatgac   | tgatgcctgt  | acacatttgc  | acacaaacaat | accttacaat  | tcactagctc  | 3480 |
| 20348 | tttggttttc  | tttccacgaa  | atataattct  | tgctctctgt  | tgatctagca  | caatcctagca | 3540 |
| 20349 | tcctctgtaca | caccacagga  | gatgtaaaac  | gcgcgatgaa  | tattccctgt  | taataaaaaa  | 3600 |
| 20350 | aagtatctcca | gtttctctca  | atgttcaata  | ttctcctgag  | ggtaggagag  | gtactctctg  | 3660 |
| 20351 | gtctgtctcaa | acaaaatggc  | cagagaccac  | ctggtaggta  | gttaaggagc  | tcactcgtct  | 3720 |
| 20352 | ctggatatag  | agtcctgtct  | tttccctctg  | tgcctctcata | gaaggccagc  | ccacttgttc  | 3780 |
| 20353 | agctcctaat  | aagagagccc  | aggtttatcc  | agattataca  | acacaacacg  | ctctgatgat  | 3840 |
| 20354 | ctctctgtt   | acaacatcca  | tgagatatatt | tttgttatta  | tataattcac  | caaactaatg  | 3900 |
| 20355 | tgaatatccc  | aaagtgaact  | actgcacacc  | ctagggtatg  | tcttctgcaat | tcagcgggag  | 3960 |
| 20356 | agaaattctt  | tcagagacag  | atggatctga  | attggttaaat | atgtgggtac  | gaattctggg  | 4020 |
| 20357 | tttgagtgtc  | attgtccagc  | catgtttcac  | agggtgtgac  | tgtcagggaa  | gaaccagagt  | 4080 |
| 20358 | tctctgtgtt  | ctcagagggt  | agagctcaca  | gaggtctctc  | ctgttcccca  | ggaaaggtaa  | 4140 |
| 20359 | tttactaatc  | cttggtgatg  | agactatctc  | ccagtgctga  | tgtaactatg  | agtttttcat  | 4200 |
| 20360 | tgaagtctgt  | actgctatct  | ccaatgtaca  | tcttttcaca  | cagaaaatgt  | tgagagctag  | 4260 |
| 20361 | gccattattc  | cagggttaca  | cattgagaag  | gatggagata  | tattctacta  | ctcttctcgt  | 4320 |
| 20362 | agatctcaca  | cacaactctca | aatttcaaaa  | ggctcagaaa  | gcgcagctct  | caggtactat  | 4380 |
| 20363 | ttaaaaataa  | ccactctctc  | gggacaggta  | gcactctctc  | aacctgatg   | gatgtttctga | 4440 |
| 20364 | actacagtc   | actatgcagt  | gatccaggtt  | tgctctcaatt | cactgtgatt  | attacactca  | 4500 |
| 20365 | gcagctgttt  | caatatgtct  | gaaggggtaa  | atgacaattt  | agggtgacct  | gggttatggt  | 4560 |
| 20366 | tggtgttata  | tgaatcttta  | aatgtagaac  | agtaattaac  | gtattccaaa  | atctgtcttt  | 4620 |
| 20367 | gatcatgat   | cacactgtgt  | tcccagacca  | gctccttcag  | acactttctc  | actctggaag  | 4680 |
| 20368 | agaggactct  | gggttttgggt | aggggagccc  | acagggaagc  | aactgagttc  | tcagagggca  | 4740 |
| 20369 | cagccagact  | acactctcca  | gaagtgcgcc  | aaaagactgg  | ggcctccctc  | atcccttttt  | 4800 |
| 20370 | acctatccat  | acaaaggcac  | caccacatcg  | caaatctcca  | cttaggcacc  | cacaggaaat  | 4860 |
| 20371 | gactacacat  | ttccttaaat  | tcagggtcca  | gctcacatgg  | cagtgctttt  | ctgagagtca  | 4920 |
| 20372 | gggcccgcga  | caatgcagca  | aaaatacatc  | gtcacctggg  | acatgttgca  | gatccatgca  | 4980 |
| 20373 | cgtaactcgt  | caagccagct  | gatgccttct  | gaacaatgga  | aaggcattat  | tgccgttaagc | 5040 |
| 20374 | cgtggcggtc  | tggtacccgg  | tgcgtaactg  | gcgcgtgaac  | tggttgatgt  | tcagtgcgat  | 5100 |
| 20375 | accgtttgta  | tttccagcta  | cgatcacgac  | aaccagcgcg  | agcttaaatg  | gctgaaacgc  | 5160 |
| 20376 | gcagaaggcg  | atggcggaag  | cttcatcggt  | attgatgacc  | tgtgggtatc  | cgggtgactt  | 5220 |

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:19

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.ln.txt

Output Set : N:\CRF4\10082003\J672764.raw

|       |             |             |            |            |             |             |      |
|-------|-------------|-------------|------------|------------|-------------|-------------|------|
| 20377 | gcgggtgcga  | ttcgtgaaat  | gtatccaaaa | gcgcactttg | tcaccattctt | cgcaaaaccg  | 5280 |
| 20378 | gcgtgtcgtc  | cgtcgtgttg  | tgtactatgt | gttgatatcc | cgcaagatgc  | ctggattgaa  | 5340 |
| 20379 | caqccgtggg  | atatgggcgt  | cgtattcgtc | cgcgcaatct | ccggtgcgta  | atcttttcaa  | 5400 |
| 20380 | ctcagagctc  | acggtatcga  | taaccatgc  | ctggaagctt | cccgccacag  | ccctcccaat  | 5460 |
| 20381 | ggggccctgc  | tgccctccta  | ggtcagcccc | ggacatcccg | ggtttcccca  | ggctgggcgg  | 5520 |
| 20382 | taggtttggg  | gtgaggtctg  | tgctactgtg | gtattactat | ggctcgggga  | gttattatac  | 5580 |
| 20383 | caagtgaact  | actgggtgct  | cgatctcagg | ggcctgggca | ccctgggtcac | tgctctctca  | 5640 |
| 20384 | ggtgagtcgc  | actgcagccc  | cctcccagtc | ttctctgtcc | aggcaccagg  | ccagggtatct | 5700 |
| 20385 | gggggtctga  | gcgcgctgtg  | gtctggcctg | aggccacacc | agctgccatc  | ccctggggtct | 5760 |
| 20386 | ccgcatggg   | ctgcatgcca  | gagccctgct | gtcacttagc | ccctggggcca | gctggagccc  | 5820 |
| 20387 | ccaaggagca  | gcaggagccc  | cgtcgggctt | cagccccctc | aggcaccctc  | ccagggtagc  | 5880 |
| 20388 | aagcaggccg  | aggcgaggga  | cgggaaggag | aagtgtgggg | cagagcctgg  | gctggggctg  | 5940 |
| 20389 | ggcgctgctg  | gttcatgtgc  | cggggaccag | gcctgcgctt | tagtgtggct  | acaagtgcct  | 6000 |
| 20390 | ggagcaactg  | ggccaggggca | gcgccggcac | cgtctccctg | ggacagctac  | ccctccctgc  | 6060 |
| 20391 | ctgggtctca  | gcgcgggggt  | ctgtgtggct | ggggacaggg | acgcgcgttc  | ccctctgctc  | 6120 |
| 20392 | gtgcttgggc  | catgtgaccc  | attcgagtgt | cctgcagaat | tcaacccatg  | ccctgaagtgt | 6180 |
| 20393 | tcgcgcacca  | gcctcccaca  | tggggccgtg | ctgcctctc  | aggcaccgcc  | ggacatctcc  | 6240 |
| 20394 | gggttcccc   | aggttggcgg  | gtaggtttgg | ggtaaggctc | gtgtcactgt  | ggattacta   | 6300 |
| 20395 | tggttcaagg  | aagctccgta  | agctttttga | tatctggggc | caaggggaca  | tggtcacctg  | 6360 |
| 20396 | ctcttcagg   | aagatgtgct  | tccttctgcg | tcctttctct | cgagccacag  | tcctctgtcc  | 6420 |
| 20397 | tggagctcgt  | agataatgct  | cgggggctcc | ttgtctgcg  | ctgggccaat  | tggggccctc  | 6480 |
| 20398 | cggggctcgt  | tcctccgctg  | tttgggacca | cgttcagcag | ccagcccttc  | tttgggaact  | 6540 |
| 20399 | gggactctgc  | tgctggggca  | aagggtgggc | agagtcatgc | ttgtctcggg  | gacaaaatga  | 6600 |
| 20400 | ccttggggaca | cggggctggc  | tgccaogggc | ggcccgggac | agtccggagag | tcaagtgga   | 6660 |
| 20401 | ccaacccatg  | cttggaagct  | tcgccccaca | gcctcccaca | tggggccctg  | ctgcctcctc  | 6720 |
| 20402 | aggtcaaac   | cggacatccc  | gggtttcccc | agcctggccg | gtaggtttgg  | ggtgaggtct  | 6780 |
| 20403 | gtgtcaactg  | ggatatgtca  | tggttcaagg | agttattata | aagtccccaa  | ctttgaactac | 6840 |
| 20404 | tggggccagg  | gaacctgtgt  | caacctctcc | tcagggtgag | cctcacaaac  | ctctctcctg  | 6900 |
| 20405 | tttaactctg  | aaggattttg  | ctgcattttt | ggggggaaat | aagggtgctg  | ggtctcctgc  | 6960 |
| 20406 | caagagagcc  | ccggagcagc  | ctggggggct | caggaggctg | ccctgaggca  | acagcgggca  | 7020 |
| 20407 | caacagcag   | gggcaagggc  | tcagatgct  | ccttctctct | gagcccaaca  | gcacgggtct  | 7080 |
| 20408 | ctctgtggca  | gggcccacct  | agcctctggg | gtccaatgcc | caacaacccc  | cggggccctt  | 7140 |
| 20409 | cccgggctca  | gtctgagagg  | gtcccaacta | gtaacccatg | ctctggaagt  | tcgccccaaca | 7200 |
| 20410 | gccctcccga  | tggggccctg  | ctgcctcctc | aggtcagccc | cggacatccc  | gggtttcccc  | 7260 |
| 20411 | aggtcggcgg  | gttaggtttg  | gtgtcaactg | ggtaggtctg | ggttattact  | tggttcaggg  | 7320 |
| 20412 | agttatttgc  | cggaaatgac  | aactggttgc | accctggggg | ccaggggaa   | ctgtctcaccg | 7380 |
| 20413 | ttctctcagg  | tgagtccctca | ccaccccctg | tttgaggcca | cttaggggga  | cctaggtctgc | 7440 |
| 20414 | cagggtctca  | gggtcacaagt | cttggaggca | ttttggaggt | caagaaagaa  | agccggggag  | 7500 |
| 20415 | agggaccctt  | cgaatgggaa  | ccagcctgtg | cctcccaca  | gtgcgccaca  | tatgtccgca  | 7560 |
| 20416 | gctggggggc  | tccttcgctg  | gtctgggggt | acctatctcc | gcttcacctg  | tgactattctc | 7620 |
| 20417 | aggggctgtc  | gtgatgattg  | cgtgggtggg | ctctgtcccg | ctctcaaggca | cccgctctct  | 7680 |
| 20418 | gggacgggtg  | gtcggcgggg  | tttttggact | cagcgggggt | acttagcagc  | cgtctgtgtg  | 7740 |
| 20419 | cagttggaat  | tcocaggccg  | acagtgtgtc | ggcttctgag | gggtcagggc  | agaatgtggg  | 7800 |
| 20420 | gctgctggga  | ggccagcaga  | gggttccatg | agaaggggca | gcacggggca  | ggccacagtca | 7860 |
| 20421 | gcttccatgt  | gaaccccgga  | gacagaaggt | ctctgtctga | aaacccatgc  | ctggaagctt  | 7920 |
| 20422 | ccgcgccacg  | ccctcccact  | gggcgccctg | tgccctctca | ggcagccacc  | ggacatcccg  | 7980 |
| 20423 | ggtttcccca  | ggttggcggt  | taggtttggg | gtgaggtctg | tgctactgtg  | gtatttctat  | 8040 |
| 20424 | gctctgggga  | gtttaa      | cgcgtact   | actgctcgga | cgctctgggc  | aaagggacca  | 8100 |
| 20425 | cggtcacogt  | ctcctcaggt  | aagaatggcc | actctagggc | ctttgttttc  | tgctactgce  | 8160 |

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:19

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.in.txt

Output Set: N:\CRF4\10082003\J672764.raw

|       |             |             |             |             |             |             |       |
|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------|
| 20426 | tgtgggggttt | ctcgagcatt  | gcaggttggt  | cttcggggcca | tgttcocagg  | ggacctggggc | 8220  |
| 20427 | ggactggagga | ggaggggatg  | ggcactgggg  | tgccttgagg  | atctggggagc | ctctgtggagt | 8280  |
| 20428 | tttcogtagtc | ctttggaaaa  | tgggaactcag | gttggtgtgcg | tctgatggag  | taactgagccc | 8340  |
| 20429 | tgggggcttg  | gggagccaca  | tttggaccag  | atgcctgaac  | aaaccagggg  | tcttagtgat  | 8400  |
| 20430 | ggcttgagga  | atgtgtctca  | ggagcgtgtg  | ctgtaggact  | gcaagatcgc  | tgcacagcag  | 8460  |
| 20431 | cgaatcgtga  | aatattttct  | ttagaattat  | gaggtgcgct  | gtgtgtcaac  | ctgcattcta  | 8520  |
| 20432 | aattctttat  | tggctggaaa  | gagaactgtc  | ggagtgggtg  | aatccagcca  | ggagggagcgc | 8580  |
| 20433 | gtagccocgg  | tcttgatgag  | agcagggttg  | ggggcagggg  | tagcccgaaa  | acggtggctg  | 8640  |
| 20434 | cgtctctgac  | aggggcttag  | ggaggctcca  | ggacctcagt  | gccttgaagc  | tgtttccat   | 8700  |
| 20435 | gagaaaaagta | tgttttatct  | taggagccat  | gcttactgtt  | aaaagacagg  | atatgtttga  | 8760  |
| 20436 | agtgcctctg  | gagaaaaatg  | gttaagaaaa  | ttatgactta  | aaaatctgag  | agattttcaa  | 8820  |
| 20437 | gtatattaat  | tttttaact   | gtccaaagtat | ttgaaattct  | tatcatttga  | ttaaacacca  | 8880  |
| 20438 | tgagtgtat   | tgtctctggaa | ttagggccgc  | gctggagtaa  | ctgagccttg  | gggcttgggg  | 8940  |
| 20439 | agccacattt  | ggacgagatg  | cctgaacaaa  | ccagggtgtc  | tagtgatggc  | tgaggaaagt  | 9000  |
| 20440 | gtctcaggag  | cgggtgtctg  | aggactgcaa  | gtacgctgca  | cagcagcga   | tcgtgaaata  | 9060  |
| 20441 | ttttctttag  | aattatgagg  | tgcgtgtgtg  | gtcaacctgc  | atctttaaatt | cttttatggc  | 9120  |
| 20442 | tggaaagaga  | actgtcggag  | tgggtgaatc  | cagccaggag  | ggacgcgtag  | ccccgtctct  | 9180  |
| 20443 | gatgagagca  | gggttggggg  | cagggtgtagc | ccagaaacgg  | tgggtccgct  | ctcgacaggg  | 9240  |
| 20444 | gcttagggag  | gctccaggac  | ctcagtgctc  | tgaagctgtg  | ttccatgaga  | aaagattgtg  | 9300  |
| 20445 | ttactcttag  | agccatgctt  | gttcttaaaa  | gacagatatg  | tgttcgaagt  | gcctctgaga  | 9360  |
| 20446 | aaaatggtta  | agaaaaattt  | gaacttaaaa  | tgtgagagat  | ttccaagtat  | atataatttt  | 9420  |
| 20447 | ttaaactgtc  | aagtatttga  | aattcttata  | atttgattaa  | gcacccatg   | tgatattgtg  | 9480  |
| 20448 | ctggaattga  | ggccaaagca  | agctcagcta  | agaaatacta  | gcacagtgtc  | gtcggccccc  | 9540  |
| 20449 | atgcgggact  | gcgttttgac  | catcataaat  | caagtttatt  | tttttaatta  | attgagcgaa  | 9600  |
| 20450 | gctggaaqca  | gatgatgaat  | tagagtcaag  | atggctgcac  | gggggtctcc  | ggcaaccaca  | 9660  |
| 20451 | gcaggtggca  | ggaagcaggt  | caaccgcaga  | gtctatttta  | ggaagcaaaa  | aaacacaatt  | 9720  |
| 20452 | ggtaaattta  | tcactctctg  | tgtgaagag   | gtggttttgc  | ccaggccagc  | atctgaaagt  | 9780  |
| 20453 | gctctactga  | gcaaaaaaac  | acctggacaa  | tttgcgtttc  | taaaataagg  | cgaggctgac  | 9840  |
| 20454 | cgaactgaa   | aaagcttttt  | ttaaactatc  | gaatttcatt  | tccaattcta  | gcttatcaac  | 9900  |
| 20455 | tgcgtatttg  | tgcacaaacg  | atatcaactt  | ctaaactgca  | ttcattttta  | aagtaagatg  | 9960  |
| 20456 | tttaagaaat  | tgaggagagt  | tagggagagt  | ttatgactgt  | attcaaaaag  | ttttttaat   | 10020 |
| 20457 | tagcttggtta | tccttctcat  | tgataattaa  | tctcaaatac  | tttttcogata | ctccagagca  | 10080 |
| 20458 | tattttctat  | aatgactgtg  | ttcacaatct  | tttttaggtta | actcgttttc  | cttttctgat  | 10140 |
| 20459 | taaggagaaa  | cacttttgata | ttctgataga  | gtggccctca  | tttttagtatt | tttcaagacc  | 10200 |
| 20460 | acttttcaac  | tctcaacttt  | aggataaagt  | ttaggtaaaa  | tgtgcacat   | tatcctgaat  | 10260 |
| 20461 | tatttcaagt  | aagcatgcta  | gttggtggca  | taaggagaaa  | ctcaatcaga  | tagtctgtaa  | 10320 |
| 20462 | gacaggaact  | tgaggacacc  | ttagaaggac  | agattctgtt  | ccgaattcac  | gagtcggctg  | 10380 |
| 20463 | cagcaggact  | ggccttagcg  | aggctctggg  | aggggtggctg | ccaggcccg   | ctcgggcttt  | 10440 |
| 20464 | gggtctcccc  | gagctaccca  | gagctgggat  | gcgtggcttc  | tgtctccggg  | ccgactggct  | 10500 |
| 20465 | gctcaggccc  | cagcccttgt  | taatggactt  | ggagggaatg  | ttccatgcca  | aagattttga  | 10560 |
| 20466 | aggtctcgag  | tgaccagggc  | cccgacatg   | taagagacag  | cgagcccgcc  | ctgctgcaat  | 10620 |
| 20467 | tgtctctctt  | aaaaactttg  | atttgacgtc  | ttatttccac  | tgaaggggga  | actgttctta  | 10680 |
| 20468 | attgcttgat  | gaagagcagg  | agactcattt  | atgtgactct  | tttttagtgac | catgtctctg  | 10740 |
| 20469 | gtcaactocca | tttaactttc  | ctcaaaagccc | atttgaagga  | gaggtgcgac  | gagctgctcc  | 10800 |
| 20470 | acaactcgtc  | aatgggggat  | gcatgggtaa  | tgtactgtta  | gaacatacca  | agccccactg  | 10860 |
| 20471 | gcactgcctt  | tgtctaaagt  | attgactgta  | ggtcatcatc  | gcacctctga  | ctcgaagcca  | 10920 |
| 20472 | tgcctttccaa | agcgattatt  | ggtaaatggc  | agaaattttag | gtggcaaaat  | caagataaaat | 10980 |
| 20473 | ccatttctctg | gttctttcca  | atgatgact   | ttatctagac  | cgcggttgat  | ctccaattctg | 11040 |
| 20474 | gcctatagtg  | atgctgtatta | cgcgcgtcca  | ctggcgtgtg  | tttttaaacg  | tcgtgactgg  | 11100 |

## RAW SEQUENCE LISTING

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:19

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.in.txt

Output Set: N:\CRF4\10082003\J672764.raw

```

20475 gaaaaccctg cggttaccga acttaatcgc cttgcagcac atcccccttt cggcagctgg 11160
20476 cgttaatagcg aagaggccgc caccgatcgc ccttcccaac cgttgagcgc cgtgaatggc 11220
20477 gaatggcgacg ccgcttgatg cggcgccatta agcgcggcgg gtgtggtggt taacgcgcagc 11280
20478 gtgacgcgcga cacttcgcag ccgcttagcg ccgcttccct gtgcttcttt ccocttcttt 11340
20479 ctgcgccagct tcgcggcgctt tcccgctcaa gctctaatac gggggctccc tttagggttc 11400
20480 cgatttagtg cttttacggca cctcgacccc aaaaaacttg attagggtga tggttcaegt 11460
20481 agtggggccat cgccctgata gacggttttt cgccctttga cgttgagctc cagcttcttt 11520
20482 aatagtggac ttgttttcca aactggaaca acactcaacc ctatctcggt ctattctttt 11580
20483 gatttataag ggattttgcc gatttcggcc tatgtgttaa aaaatgagct gatttaacaa 11640
20484 aaatttaacg cgaattttta caaaatatta acgcttaaca tttagggtgc acttttcggg 11700
20485 gaaatgtgcy cgaagccccc atttgtttat ttttctaaat acattcaaat attgatccgc 11760
20486 tcatgagaca ataaccttga taaatgcttc aataaatttg aaaaaggaag agtatgagta 11820
20487 ttcaacatttt cggctgctgc ctatttccct tttttgcggc attttgcttt cctgtttttg 11880
20488 ctaccccgaca aacgctgggtg aaagtaaaag atgctgaaga tcaagtggtg gcacgagtg 11940
20489 gttacatcga actggtatctc aacagcggtta agatccttga gattcttcgc ccgacaagaac 12000
20490 gttttccaat gatgagcact tttaaagttc tgctatgtgg cggggtatta tcccgtattg 12060
20491 acgcggggca agagcaactc ggtgcgcgca tacactattc tcagaatgac ttggttgagt 12120
20492 actcaccagt cagagaaaag catcttaagg atggcatgac atgaagagaa ttatcgagt 12180
20493 ctgccataac catgatgatg aacactcgcg ccaacttact tctgacaacg attcggagac 12240
20494 cgaaggagctc aacgcgtttt ttgcacaaca tgggggtagc ctgtatcgct 12300
20495 ggggaccggga gctgaatgaa gccataccaa acgacgagcy tgacaccacg attgcctgag 12360
20496 caactcaagc aacgttgcgc aactatttaa ctgycgaact acttactcta gcttcccgcg 12420
20497 acaaatattat agactggatg gaggcggata aagtgcgagg acaacttctc cgctcggccc 12480
20498 ttccgctgcty ctggtttatt gctgataaat ctggagcggc tgagcgtggg tctcgcggta 12540
20499 tcatgtcagc actggggcca gatgtaagc cctccggtat cgtagttatc tacacgacg 12600
20500 ggagtcaagg aactatgagt gaacgaataa gacagatcgc tgagataggt gcctcactga 12660
20501 ttaagcattg gtaactgtca gaccaagttt actcatatat actttaagat gatttaaaac 12720
20502 ttoattttta ttataaaagg atctagtgta agatccttt tgataatctc atgaocaaaa 12780
20503 tcccttaacg taggttttgc ttccactgag cgtcagaccc cgtgaaaaag atcaaaagat 12840
20504 ctcttttaga tcttttttct ctgcgcgtaa tctgctgctt gcaaaacaaa aaaccacgcg 12900
20505 taccagcggt gggtttgttg ccgatcaag agctaccaac tctttttccg aaggttaactg 12960
20506 gcttcagcag acgcgcagata ccaaaactg tcttctctag gtacgcctag ttaggccacc 13020
20507 acttcaagca cctgtgagca ccgctacat acctcgctct cgttaactcg ttaccagtg 13080
20508 ctgctgcagc tggcgataag tctgttctta ccgggttgga ctcaagacga tagttaccgg 13140
20509 ataggcgcca ggcgtcgccc tgaacggggg gttcgtgcac acagcccgac ttggagcgaa 13200
20510 cgactacacg cgaactgaga tacctacagc gtgagctatg agaaagcgcc acgcttcccg 13260
20511 aaggggaaaa ggcgcagcag tatccggtaa tccgcagggg cggacacaga gagcgacaga 13320
20512 gggagcttcc agggggaaac gcttggtatc tttatagctc tgcgggttt cgcacactct 13380
20513 gacttgagcg tcatgttttg tgatgctcgt caggggggcg gagcctatgg aaaaacgcga 13440
20514 gcaacggcgc ctttttaacg ttctggcctc tttgctggcc ttgtctcac attgtcttc 13500
20515 ctgctgttgc cctgatctct ttggataacc gtattaccgc ctgttagtga gctgataccg 13560
20516 ctgcgcgcat ccgaacgacc gagcgcagcg agtcagtgag cggaggaagcg gaagagcgcc 13620
20517 caatacgcga accgcctctc cccgcgcgtt ggccgatcca ttaatgcagc tggcacgaca 13680
20518 ggtttccgca ctggaagcgg ggcagtgagc gcaacgcaat taatgtgagt tagcttactc 13740
20519 atgggaaccc ccaggcttta cactttatg ttccgctgct tatgtgtgtg ggaattgtga 13800
20520 cggataacaa attttacaca ggaaacagct atgacctga ttaacgcaag cgcgaactta 13860
20521 acctcaacta aagggaacaa aagctg

```

> 20523 135 Use of n and/or Xaa has been detected in the Sequence Listing.

*DELETE*  
 Review the Sequence Listing to insure a corresponding explanation is presented in the <220> to <223> fields of each sequence using n or Xaa.

Please: ensure all nucleotides are in lower-case letters when  
Sequence Listing is in new Sequence Rules format.

## VERIFICATION SUMMARY

DATE: 10/08/2003

PATENT APPLICATION: US/10/672,764

TIME: 13:25:20

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.ln.txt

Output Set: N:\CRF4\10082003\J672764.raw

0 M:270 C: Current Application Number differs, Replaced Current Application No  
 0 M:271 C: Current Filing Date differs, Replaced Current Filing Date  
 52 M:310 E: (3) Wrong or Missing Sequence Type, TYPE:  
 7513 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 7517 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:52  
 7523 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:52 after pos.:300  
 41 Repeated in SeqNo=52  
 7681 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 7685 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:53  
 7691 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:53 after pos.:300  
 41 Repeated in SeqNo=53  
 7864 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 7868 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:54  
 7918 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:54 after pos.:2940  
 41 Repeated in SeqNo=54  
 8502 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 8506 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:55  
 8556 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:55 after pos.:2940  
 41 Repeated in SeqNo=55  
 9153 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9157 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:56  
 9207 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:56 after pos.:2940  
 41 Repeated in SeqNo=56  
 9804 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9808 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:57  
 9809 M:112 C: (48) String data converted to lower case,  
 9819 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9823 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:58  
 9824 M:112 C: (48) String data converted to lower case,  
 9834 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9838 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:59  
 9839 M:112 C: (48) String data converted to lower case,  
 9849 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9853 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:60  
 9854 M:112 C: (48) String data converted to lower case,  
 9864 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9868 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:61  
 9869 M:112 C: (48) String data converted to lower case,  
 9879 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 9883 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:62  
 9884 M:254 E: No. of Bases conflict, LENGTH:Input:27 Counted:26 SEQ:62  
 12 Repeated in SeqNo=62  
 9884 M:252 E: No. of Seq. differs, <211> LENGTH:Input:27 Found:26 SEQ:62  
 0126 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 0130 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:65  
 0131 M:112 C: (48) String data converted to lower case,  
 0141 M:281 W: Numeric Fields not Ordered, <221> Sort in ascending order!  
 0145 M:258 W: Mandatory Feature missing, <220> Tag not found for SEQ ID#:66



VERIFICATION SUMMARY

PATENT APPLICATION: US/10/672,764

DATE: 10/08/2003

TIME: 13:25:20

Input Set : C:\WINNT\Profiles\guest\Desktop\pto.ln.txt

Output Set: N:\CRF4\10082003\J672764.raw

0146 M:112 C: (48) String data converted to lower case,

12 Repeated in SeqNo=66

0523 M:254 E: No. of Bases conflict, this line has no nucleotides.